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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,949	08/18/2006	Tadashi Ogasawara	12054-0067	2126
22502	7590	03/24/2010		
CLARK & BRODY 1700 Diagonal Road, Suite 510 Alexandria, VA 22314			EXAMINER	
			RIPA, BRYAN D	
			ART UNIT	PAPER NUMBER
			1795	
MAIL DATE	DELIVERY MODE			
03/24/2010	PAPER			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/589,949	<b>Applicant(s)</b> OGASAWARA ET AL.
	<b>Examiner</b> BRYAN D. RIPA	<b>Art Unit</b> 1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on \_\_\_\_\_.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_ is/are allowed.  
 6) Claim(s) \_\_\_\_ is/are rejected.  
 7) Claim(s) \_\_\_\_ is/are objected to.  
 8) Claim(s) 1-12 are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group 1, claim 1, drawn to a method for producing Ti or Ti alloys.

Group 2, claim 2, drawn to a method for producing Ti or Ti alloys.

Group 3, claim 3, drawn to a method for producing Ti or Ti alloys.

Group 4, claims 4 and 5, drawn to a method for producing Ti or Ti alloys.

Group 5, claims 6-10, drawn to a method for producing Ti or Ti alloys.

Group 6, claim 11, drawn to a method for producing Ti or Ti alloys.

Group 7, claim 12, drawn to a method for producing Ti or Ti alloys.

The inventions listed as Groups 1-7 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features.

Each of the inventions recites:

A method for producing Ti or Ti alloys through reduction by Ca, comprising:

- a reduction electrolysis step in which a molten salt is held in a reactor cell to perform electrolysis in the molten salt of the reactor cell, with Ca being dissolved in the molten salt, and supplying a metallic chloride containing  $TiCl_4$  into the molten salt in order to cause the metallic chloride containing  $TiCl_4$  to react with Ca generated on a cathode electrode side by the electrolysis; and
- a Ti separation step of separating the Ti or Ti alloys from the molten salt.

However, this subject matter is determined to lack inventive step according to Ginatta, (U.S. Pat. No. 6,074,545) (hereinafter referred to as "GINATTA").

GINATTA teaches a method of producing Ti or Ti alloys through reduction by Ca (see generally col. 3 lines 41-51 teaching the method of producing Ti through a reaction of Ti with Ca in the electrolyte that results in Ca and Ti ions being reduced at the cathode), comprising:

- a reduction electrolysis step in which a molten salt is held in a reactor cell to perform electrolysis in the molten salt in the reactor cell (see col. 11 lines 25-30 teaching the electrolysis being conducted in a molten salt electrolyte; see also figure 2 showing the molten salt electrolyte 22 contained in a reactor cell where the electrolysis occurs), with Ca being dissolved in the molten salt (see col. 13 lines 39-42 teaching the molten salt electrolyte having  $CaCl_2$  with the Ca being dissolved and available to

react with the TiCl<sub>4</sub>) and supplying a metallic chloride containing TiCl<sub>4</sub> into the molten salt in order to cause the metallic chloride containing TiCl<sub>4</sub> to react with Ca generated on the cathode electrode side by the electrolysis (see col. 12 lines 50-55 teaching TiCl<sub>4</sub> being added to the molten salt electrolyte; see also col. 14 lines 35-38 teaching the co-deposition of Ti and Ca at the cathode where the Ca is further reacted with the TiCl<sub>4</sub> because it quickly dissolves into the molten salt electrolyte); and

- a Ti separation step of separating Ti or the Ti alloy from the molten salt (see col. 13 lines 51-53 teaching the growth of the Ti metal ingot which would then be removed in order to allow for the further processing of the Ti metal or alloy produced).

Due to the complexity of the restriction requirement, a telephone call was not made to request oral election to above restriction requirement. See MPEP §812.01.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does

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not distinctly and specifically point out supposed errors in the restriction requirement,  
the election shall be treated as an election without traverse.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN D. RIPA whose telephone number is 571-270-7875. The examiner can normally be reached on Monday to Friday, 9:00 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Harry D Wilkins, III/  
Primary Examiner, Art Unit 1795

/B. D. R./  
Examiner, Art Unit 1795